

*β3Gal-T5*

```

-78 CCACCTCAGCCTCCTAGCATAAAACTAGACACATCCTCATGCTTTTGGAGGTCTAATCATTGGATTTTGTTCCTTTCAG -1
1   M A F P K M R L M Y I C L L V L G A L C L Y Y S M N 26
1   ATGGCTTTCCCGAAGATGAGATTGATGTATATCTGCCTTCTGGTTCTGGGGGCTCTTTGTTTGTATTATAGCATGAAC 78
27  S L N P F K E Q S F V Y K K D G N F L K L P D T D C 52
79  AGTCTAAATCCTTTCAAAGAACAGTCCTTTGTTTACAAGAAAGACGGGAACCTTCCTTAAGCTCCCAGATACAGACTGC 156
53  R Q T P P F L V L L V T S S H K Q L A E R M A I R Q 78
157 AGGCAGACACCTCCCTTCCTCGTCTGCTGGTGACCTCATCCACAAACAGTTGGCTGAGCGCATGGCCATCCGGCAG 234
79  T W G K E R T V K G K Q L K T F F L L G T T S S A A 104
235 ACGTGGGGGAAAGAGAGGACGGTGAAGGGAAAGCAGCTGAAGACATTCTTCCTCCTGGGGACCACCAGCAGTGCAGCG 312
105 E T K E V D Q E S Q R H G D I I Q K D F L D V Y Y N* 130
313 GAAACAAAAGAGGTGGACCAGGAGAGCCAGCGACACGGGACATTATCCAGAAAGGATTTCCTAGACGTCTATTACAAT 390
131 L T L K T M M G I E W V H R F C P Q A A F V M K T D 156
391 CTGACCCTGAAGACCATGATGGGCATAGAATGGGTCCATCGCTTTTGTCTCCTCAGGCGGCGTTTGTGATGAAAACAGAC 468
157 S D M F I N V D Y L T E L L L K K N* R T T R F F T G 182
469 TCAGACATGTTTCATCAATGTTGACTATCTGACTGAACTGCTTCTGAAGAAAAACAGAACACACAGGTTTTTCACTGGC 546
183 F L K L N E F P I R Q P F S K W F V S K S E Y P W D 208
547 TTCTTGAAACTCAATGAGTTTCCCATCAGGCAGCCATTTCAGCAAGTGGTTTGTCTAGTAATCTGAATATCCGTGGGAC 624
209 R Y P P F C S G T G Y V F S G D V A S Q V Y N* V S K 234
625 AGGTACCCACCATTCTGCTCCGGCACCGGCTACGTGTTTTCTGGCGACGTGGCGAGTCAGGTGTACAATGTCTCCAAG 702
235 S V P Y I K L E D V F V G L C L E R L N I R L E E L 260
703 AGCGTCCCATACATTAAACTGGAAGACGTGTTTGTGGGGCTCTGCCTCGAAAGGCTGAACATCAGATTGGAGGAGCTC 780
261 H S Q P T F F P G G L R F S V C L F R R I V A C H F 286
781 CACTCCCAGCCGACCTTTTTTCCAGGGGGCTTACGCTTCTCGTATGCCTCTTCAGGAGGATCGTGGCCTGCCACTTC 858
287 I K P R T L L D Y W Q A L E N S R G E D C P P V * 310
859 ATCAAGCCTCGGACTCTCTTGACTACTGGCAGGCTCTAGAGAATTCCCGGGGGAGATTGTCCGCCTGTCTGA... 933

```

FIGURE 1

```

βGal-T1 : -----MASHVSCLYVTVVCHASALVLSIT-----RP : 28
βGal-T2 : NLOVRRHCCFAKHTWNAKRSFTHICVLSVFLFAMLEFNNHMDLPCNAGFENPVYTFQCFRSTKSETHSSLRNIMKSTVQTLRP : 93
βGal-T3 : -----MAFPKMLHNYICUCLVLCALCLYFSMYS----- : 27
βGal-T4 : -----MASALHTVLPSPMSLHSLKWSLLLSLLSFFVMVYLSL----- : 39
βGal-T5 : -----MOLALFQ-----NLAJANALLLVLMYTFCH----- : 25
βGal-T6 : -----TSSYVTGS-----KQ-----PSHULTVARKNFTYGNIR--TRPINSVSEFLINEPNKCEK--NIDELVVIISTTHKEFDARQRIETRGDENEKGI : 110
βGal-T7 : OTATNSNHTDLSHOCVTGLENTLSAMGSIYNEKG--TCUPNSVSKYLIHEPKCOB--KSEELIILIAAETHGOIERPRRROTHGNESLAPGI : 183
βGal-T8 : -----LMR-----FKEOSFYVKK-----DGNFLKLPD--TDCRO--DPDELVLVTSSHKOLARMAIRQATGCKERTWVK : 89
βGal-T9 : -----HYNVIERYVWHYFYEY--EPIYRQDEHFTREHNSCSH--ONDELVIIVTSHSDVKARQRIETRGCEKKSWMGY : 110
βGal-T10 : -----SG-----LGEELLSLSLALLPATASPCPLALPRLIPNQ--EACSGCGAPDELILVCTAENLNQBNRIRASGGLREARGL : 103
βGal-T11 : -----KIALLLELIGKNAOP-----VLNQNVESQIITNDIIVDEITDSYHRTLLKLLMGHRRVATYCSKMKVHKVTSIVRMDNLVYK----- : 193
βGal-T12 : QITRIEELGLSILKN--G-YHQRAILESRQVNDIIOEYLDITYVRIETIKTLGCMHRAVATYCEHHPYVVMKTSNEVNTYELINKLIM----- : 268
βGal-T13 : OLVEFFELGTTSSA-----AETKEVDOSORIGDIIOKDELQVYVYHETKAMMGIEHVRHRECEHQAIFVHKTSIENINVDYITELIIM----- : 172
βGal-T14 : EVLFFELGGOEAEKE--DKMHALSLEHLLGDIIOKDELQVYVYHETKAMMGIEHVRHRECEHQAIFVHKTSIENINVDYITELIIM----- : 196
βGal-T15 : RVQVLEHGEPEPNAOHVPVNGSQGSDLASAAGDILQANRQDSYHRTLLKLLMGHRRVATYCSKMKVHKVTSIVRMDNLVYK----- : 196
βGal-T16 : -----PSTKMPAR-----NYETGVVING--CEIIOVNSVWYVNDIITF--DINWPPICSGCGTITSDVAVELLVYKTSHTLRLIM : 263
βGal-T17 : -----PDLPFRRH-----NYETGVVING--CEIIOVNSVWYVNDIITF--DINWPPICSGCGTITSDVAVELLVYKTSHTLRLIM : 339
βGal-T18 : -----KNRTTH-----FETGLKNEFEHPOPSMFWKSEY--WDRPFCSCGCGTITSDVAVELLVYKTSHTLRLIM : 241
βGal-T19 : -----LNHSEK-----FETGLKNEFEHPOPSMFWKSEY--WDRPFCSCGCGTITSDVAVELLVYKTSHTLRLIM : 265
βGal-T20 : COVERSTEFQREAEQEGQVHSEVPLLYLGRVHRVNEBTTCGRHVRSEEQWHTMGCPFPPVNSGCGTITSDVAVELLVYKTSHTLRLIM : 289
βGal-T21 : EDVAVGICLIRGCTHHTQ--N--SCFVKKHAYSLRYARVHTVHIOISPEHHRITNDMSKKHLRG----- : 326
βGal-T22 : EDVAVGICLIRGCTHHTQ--N--SCFVKKHAYSLRYARVHTVHIOISPEHHRITNDMSKKHLRG----- : 422
βGal-T23 : EDVAVGICLIRGCTHHTQ--N--SCFVKKHAYSLRYARVHTVHIOISPEHHRITNDMSKKHLRG----- : 310
βGal-T24 : EDVAVGICLIRGCTHHTQ--N--SCFVKKHAYSLRYARVHTVHIOISPEHHRITNDMSKKHLRG----- : 331
βGal-T25 : EDVAVGICLIRGCTHHTQ--N--SCFVKKHAYSLRYARVHTVHIOISPEHHRITNDMSKKHLRG----- : 378

```

FIGURE 2

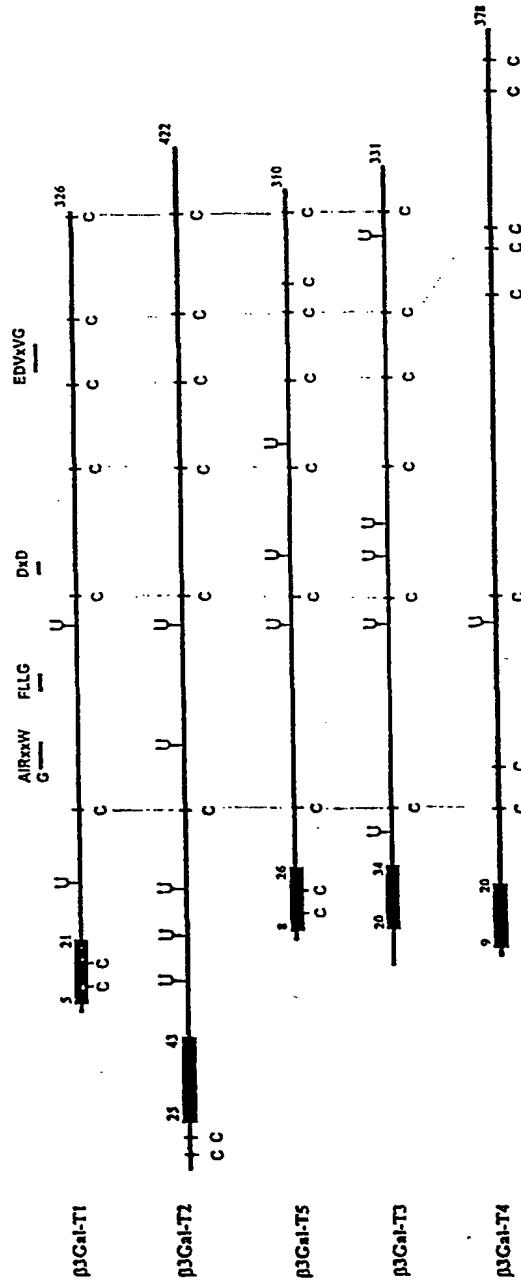


FIGURE 3

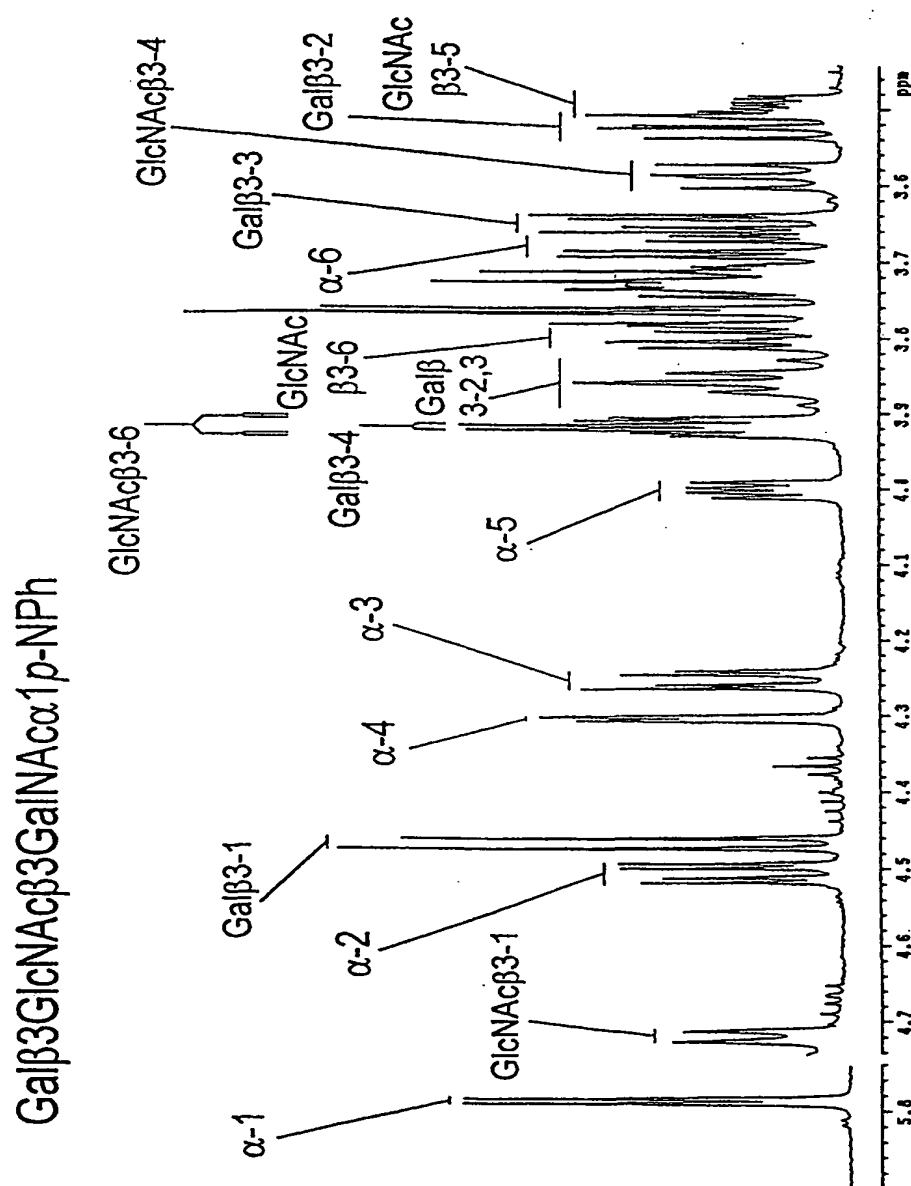


FIGURE 4

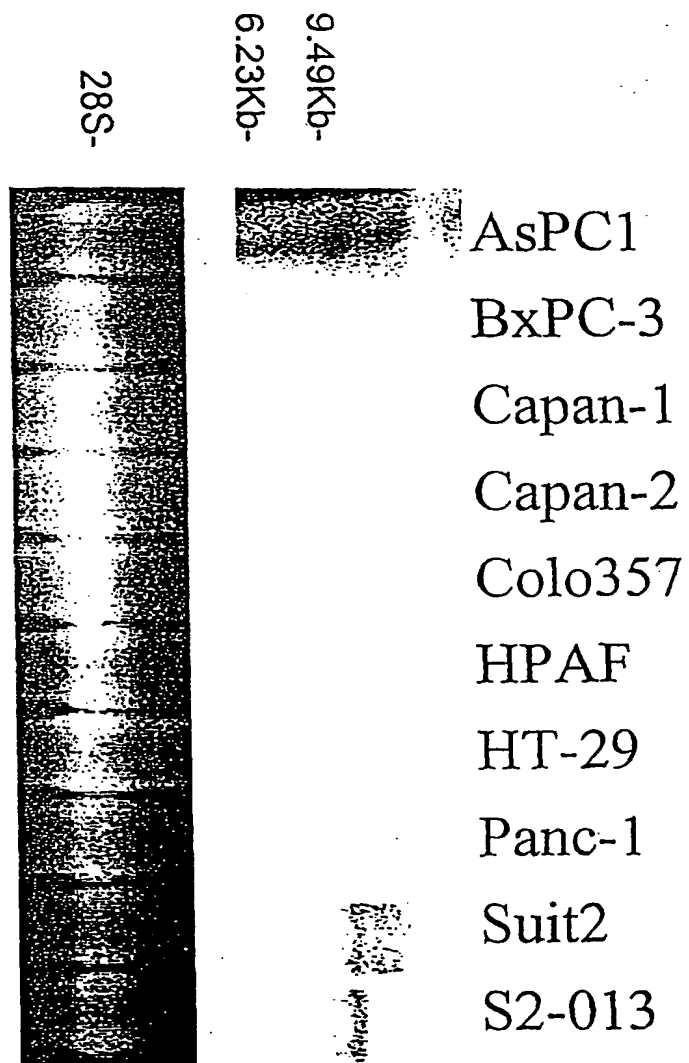


FIGURE 5